

# Do Executive Functions Predict Performance in All Switching Tasks?

**Andrea Molzhon**

Virginia Commonwealth University

**Michelle Ellefson**

Virginia Commonwealth University

**Elisabeth Blagrove**

University of Warwick

**Nick Chater**

University College London

**Abstract:** Previous task switching studies have demonstrated improvements in switching abilities throughout childhood and adolescence. This pattern may reflect a development of executive functions, as efficient switching may depend on two processes: inhibition and switching. The current study examined the relation between executive functions and task switching with participants from 6 years to adulthood across different contexts: figure matching, arithmetic, and reading. Executive functions were measured using an extended version of Shape School. Separate path analyses indicated that executive skills account for switching in all contexts, but the fit of the reading model did not meet acceptable standards. The results supported the importance of both age and executive functions on task switching ability for figure matching and arithmetic, but not necessarily reading. Therefore, it could be the case that the contribution of executive functions in task switching experiments may not be equivalent, potentially depending on the strength of switch.